PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: O79610

Susumu KAYAMA, et al.

Appln. No.: 10/586,540

Group Art Unit: 2811

Confirmation No.: Not Yet Assigned

Examiner: Not Yet Assigned

Filed: July 19, 2006

For:

METAL OXIDE DISPERSION, METAL OXIDE ELECTRODE FILM, AND DYE

SENSITIZED SOLAR CELL

REQUEST FOR CORRECTED OFFICIAL FILING RECEIPT AND NOTICE OF ACCEPTANCE

ATTN: Office of Initial Patent Examination

Filing Receipt Correction Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

We enclose a copy of the Official Filing Receipt and Notice of Acceptance for the aboveidentified application and request the following correction(s):

DATE OF COMPLETION OF ALL 35 U.S.C. 371 REQUIREMENTS

07/22/2006 **07/19/2006**

Applicants

Susumu Kayama, Toyama-shi, Toyama, JAPAN;

Yasuaki Wakizaka, Toyama-shi, JAPAN;

Kunio Kondo, Chiba-shi, JAPAN;

Assignment For Published Patent Application

SHOWA DENKO K.K., Tokyo, JAPAN

CORRECTED OFFICIAL FILING RECEIPT REQUEST

U.S. Appln. No.: 10/586,540

Attorney Docket No.: Q79610

Verification for the requested correction(s) is indicated on the Declaration, Assignment and Electronic Acknowledgement Receipt filed and received July 19, 2006.

Respectfully submitted,

SUGHRUE MION, PLLC Telephone: (202) 293-7060 Facsimile: (202) 293-7860

washington office 23373 customer number

Date: November 10, 2008

Sheldon I. Landsman

Registration No. 25,430



United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS PO. Box 1450 Alexandra, Virginia 22313-1450 www.uspto.gov

U.S. APPLICATION NUMBER NO. FIRST NAMED APPLICANT ATTY. DOCKET NO.

10/586,540 Susumu Kayama Q79610

23373 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037 INTERNATIONAL APPLICATION NO.

PCT/JP05/01180

I.A. FILING DATE PRIORITY DATE

01/21/2005 01/22/2004

DOCKETED

OCT 1 0 2008

CONFIRMATION NO. 1641 371 ACCEPTANCE LETTER

OC00000032461723

Date Mailed: 10/07/2008

NOTICE OF ACCEPTANCE OF APPLICATION UNDER 35 U.S.C 371 AND 37 CFR 1.495

The applicant is hereby advised that the United States Patent and Trademark Office in its capacity as a Designated / Elected Office (37 CFR 1.495), has determined that the above identified international application has met the requirements of 35 U.S.C. 371, and is ACCEPTED for national patentability examination in the United States Patent and Trademark Office.

The United States Application Number assigned to the application is shown above and the relevant dates are:

07/19/2006

DATE OF RECEIPT OF 35 U.S.C. 371(c)(1), (c)(2) and (c)(4) REQUIREMENTS

DATE OF COMPLETION OF ALL 35 U.S.C. 371 REQUIREMENTS

A Filing Receipt (PTO-103X) will be issued for the present application in due course. THE DATE APPEARING ON THE FILING RECEIPT AS THE "FILING DATE" IS THE DATE ON WHICH THE LAST OF THE 35 U.S.C. 371 (c)(1), (c)(2) and (c)(4) REQUIREMENTS HAS BEEN RECEIVED IN THE OFFICE. THIS DATE IS SHOWN ABOVE. The filing date of the above identified application is the international filing date of the international application (Article 11(3) and 35 U.S.C. 363). Once the Filing Receipt has been received, send all correspondence to the Group Art Unit designated thereon.

The following items have been received:

- Copy of the International Application filed on 07/19/2006
- Copy of the International Search Report filed on 07/19/2006
- Preliminary Amendments filed on 07/19/2006
- Information Disclosure Statements filed on 07/19/2006
- · Oath or Declaration filed on 07/19/2006
- U.S. Basic National Fees filed on 07/19/2006
- Priority Documents filed on 07/19/2006
- · Specification filed on 07/19/2006
- Claims filed on 07/19/2006
- Abstracts filed on 07/19/2006
- Drawings filed on 07/19/2006



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION FILING or GRP ART 371(c) DATE FIL FEE REC'D ATTY.DOCKET.NO TOT CLAIMS IND CLAIMS NUMBER UNIT 10/586,540 07/19/2006 2811 4350 Q79610 68

CONFIRMATION NO. 1641

23373 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037

FILING RECEIPT

OC000000032461722

DOCKETED

OCT 1 0 2008

Date Mailed: 10/07/2008

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections

Applicant(s)

Susumu Kayama, Toyama-shi, Toyama, JAPAN; TOYAMA-SHI Yasuaki Wakizaka, Toyama-shi, JAPAN;

Kunio Kondo, Chiba-shi, JAPAN;

Assignment For Published Patent Application

[SHOWA DENKO K.K.] SHOWA DENKO K.K., TOKYO, JAPAN

Power of Attorney: The patent practitioners associated with Customer Number 23373

Domestic Priority data as claimed by applicant

This application is a 371 of PCT/JP05/01180 01/21/2005 which claims benefit of 60/541,504 02/04/2004 and claims benefit of 60/541,503 02/04/2004

Foreign Applications

JAPAN 2004-014971 01/22/2004 JAPAN 2004-014987 01/22/2004 JAPAN 2004-342808 11/26/2004

If Required, Foreign Filing License Granted: 10/06/2008

The country code and number of your priority application, to be used for filing abroad under the Paris Convention,

is **US** 10/586,540

Projected Publication Date: 01/15/2009

Non-Publication Request: No Early Publication Request: No REQUEST FOR EARLY NOTIFICATION OF SERIAL NUMBER

NATIONAL STAGE OF PCT/JP2005/001180 FILED ON January 21, 2005

Inventor(s): Susumu KAYAMA, Yasuaki WAKIZAKA, and Kunio

Title: METAL OXIDE DISPERSION, METAL OXIDE ELECTRODE FILM, AND DYE SENSITIZED SOLAR CELL

Atty Doc. #: Q79610 Client: SEIWA PATENT & LAW

Filing Date: July 19, 2006 # Pgs. Spec/Abst: 100/1 #Claims: 68

Dwg. Sheets: 4 Decl Yes (5 pages) Prelim Amdt Yes

IDS/Prior Art: Yes Pr Doc: No Asgmt: Yes Fee: \$4350/40

PCT/ISA/210 and PCT/ISA/237

☐ Check Attached ☐ Charge to Deposit # 19-4880 Atty/Sec: SIL/sdc

PTO SB/08 A&B and PTO FORM 1595

SERIAL NO.:

CONF NO .:



NATIONAL STAGE OF PCT/JP2005/001180 FILED ON January 21, 2005

Inventor(s): Susumu KAYAMA, Yasuaki WAKIZA KA, and Kunio KONDO

Title: METAL OXIDE DISPERSION, METAL OXIDE ELE FILM, AND DYE SENSITIZED SOLAR CELL

Atty Doc. #: Q79610 Client: SEIWA PATENT & LAW

Filing Date: July 19, 2006 # Pgs. Spec/Abst: 100/1 #Claims: 68

Dwg. Sheets: 4 Decl Yes (5 pages) Prelim Amclt Yes

IDS/Prior Art: Yes Pr Doc: No Asgmt: Yes Fee: \$4350/40

PCT/ISA/210 and PCT/ISA/237

☑ Check Attached ☐ Charge to Deposit # 19-488O Atty/Sec: SIL/sdc

PTO SB/08 A&B and PTO FORM 1595 (CERIAL NO. AP7 Rec'0 FC

SERIAL NO.:

Docket No.:	

DECLARATION AND POWER OF ATTORNEY FOR UTILITY OR DESIGN PATENT APPLICATION (37 C.F.R. 1.63)

実用・意匠特許出願宣言書および委任状 (37 C.F.R. 1.63)

Japanese Language Declaration

私は以下の通り宣言します:	I hereby declare that:
各発明者の住所、郵送先、および国籍は下記氏名の後に 記載された通りです。	Each inventor's residence, mailing address, and citizenship are as stated below next to their name.
下記名称の発明に関し請求範囲に記載され特許出願がさ れている発明内容につき、下記に記載された発明者が本 来かつ最初の発明者であると信じます。	I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:
	METAL OXIDE DISPERSION, METAL OXIDE
	ELECTRODE FILM, AND DYE SENSITIZED
	SOLAR CELL
□ 上記発明の明細書は本書に添付されます。または	the specification of which is attached hereto OR
□ 上記発明は米国出願番号あるいはPCT国際出願番号(確認番号)として 年_月_日に出願され、年_月_日に補正されました(該当する場合)。	was filed on <u>January 21, 2005</u> as United States Application Number or PCT International Application Number <u>PCT/JP2005/001180</u> (Confirmation No), and was amended on(if applicable).
私は補正が上に明示された場合は補正された特許請求範	I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.
私は一部継続出願の場合先行出願の出願日から一部継続 出願の国内あるいはPCT国際出願日までの期間中に入手 された重要な情報を含み、37 C.F.R. 1.56に定義される 特許性に肝要な情報について開示義務があることを認め ます。	I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. 1.56, including for continuation-in-part application(s), material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

Japanese Language Declaration

私は35 U.S.C. 119(a)-(d) あるいは(f), または365(b)に基づき特許、発明者、あるいは植物育種 家証書の下記外国出願、または365(a)に基づきアメリカ 合衆国以外の少なくとも1ヶ国を指定した下記PCT国際出 願についての外国優先権特典をここに主張するとともに 、下記項目にx印を付けることにより優先権を主張する出 願以前の出願日を有する特許、発明者、あるいは植物育 種家証書の外国出願またはPCT国際出願を示します。

ることをここに宣言し、さらに故意になされた虚偽の陳

1001に基づき罰金あるいは拘禁または両方による処罰に

あたり、またかような故意による虚偽の陳述はそれに基づく特許出願あるいは成立特許の有効性を危うくする可能性があることを認識した上でこれらの陳述をなしたこ

述等々は18 U.S.C.

とを宣言します。

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application(s) which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application(s) having a filing date before that of the application on which priority is claimed.

				,		
	Prior Foreign Application Number 先行外國出願番号	er(s)				Claimed? の主張? No
2	2004-014971 (Pat. Appln. (Application Number) (出願番号)) Japan (Country) (国名)	- .	22/January/2004 (Filing Date) (出願日)	有り	無し口
Ž	2004—014987(Pat. Appln. (Application Number) (出願番号) * Please see the attac	(Country) (国名)		22/January/2004 (Filing Date) (出願日) Foreign Application.	X	
	優先権をここに主張します。	下記の米国仮特許出願の国内		Foreign Application. I hereby claim domestic priority under 35 tunited States provisional application(s) liste	J.S.C. 119 d below.	e) of any 🧳
	60/541,504 (Application Number) (出願番号)	04/February/2004 (Filing Date) (出願日)	-			
	60/541,503 (Application Number) (出願番号)	04/February/2004 (Filing Date) (出願日)	-			
	について開示義務があるこ	る下記PCT国際出願の利益を 時許請求範囲の各項目の内 頃に規定される方法により先 出願で開示されていない限り 義される本出願の特許性に 願日から本特許出願の国内 での期間中に入手された情報 とを認めます。		I hereby claim benefit under 35 U.S.C. 120 application(s) or 365(c) of any PCT internatesignating the United States, listed below subject matter of each of the claims of the disclosed in a listed prior United States capplication in the manner provided by the 35 U.S.C. 112, I acknowledge my dutinformation material to the patentability of defined in 37 C.F.R. 1.56 which occurred date of the prior application and the international filing date of this application:	ational apply and, inso is application PCT into e first paray to disc f this apply between	ication(s) far as the ion is not ernational agraph of lose any ication as the filing
	Prior U.S. or International Appli 先行米国あるいは国際出願者 (Application Number) (出願番号)		_	(Status: patented, pending, abandoned) (状態:特許成立済、係属中、放棄済		
	(Application Number) (出願番号)	(Filing Date) (出額日)	_	(Status: patented, pending, abandoned) (状態:特許成立済、係属中、放棄済		
	私は本宣言書内で私自身の欠 ての陳述が真実であり、情報 いてなされたすべての陳述が	限および信ずるところに基づ		I hereby declare that all statements made knowledge are true and that all statements and belief are believed to be true; and statements were made with the knowled	made on in I further t	formation hat these

knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Japanese Language Declaration

委任状:私は下記の米国特許商標局 (USPTO) 顧客番号 のもとに記載されるSUGHRUE

MION法律事務所のすべての弁護士を、同顧客番号のもと に記載される個々の弁護士はSughrue

Mion法律事務所のみの自由裁量に基づき変更され得ることを認識した上で、本特許出願の手続きおよびそれに関わる米国特許商標局との業務を遂行する弁護士として指名し、本特許出願に関するすべての通信が同USPTO顧客番号のもとに提出された住所宛に送付されることを要請します。

POWER OF ATTORNEY: I hereby appoint all attorneys of SUGHRUE MION, PLLC who are listed under the USPTO Customer Number shown below as my attorneys to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith, recognizing that the specific attorneys listed under that Customer Number may be changed from time to time at the sole discretion of Sughrue Mion, PLLC, and request that all correspondence about the application be addressed to the address filed under the same USPTO Customer Number.

STATEMENT OF ACCURATE TRANSLATION IN ACCORDANCE WITH 37 C.F.R. §1.69(b):

The declaration and power of attorney is an accurate translation of the corresponding English language declaration and power of attorney,

Signature ,

Date

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

電話連絡は下記へ:

SUGHRUE MION, PLLC (202) 293-7060

Direct Telephone Calls to:

SUGHRUE MION, PLLC (202) 293-7060

		,, , , , , , , , , , , , , , , , , , ,			
NAME OF SOLE OR FIRST INVENTOR: 唯一あるいは第一の発明者名 Susumu Kayama					
Given Name (first and middle [if any]) 名 (名およびミドルネーム[該当する場合]) Susumu	Family Name or Surname 姓 Kayama	,			
Inventor's signature	Date 日付	May 18, 2006			
Residence: िर्ण: Toyama—shi, Toyama, Japan		Citizenship 国籍 Japanese			
Mailing Address: c/o SHOWA TITANIUM CO. LTD., 3-1, Nishinomiyamachi, Toyama-shi, Toyama 郵送先: 931-8577, Japan					
NAME OF SECOND INVENTOR: 第三切 発明者名: Yasuaki Wakizaka					
Given Name (first and middle [if any]) Family Name or Surname 名 (名およびミドルネーム[該当する場合]) Yasuaki 姓 Wakizaka		3			
Inventor's signature Yasuaké Uakéyaka	Date 日付				
Residence: 住所: Toyama-shi, Toyama, Japan	Citizenship 国籍 Japanese				
Mailing Address: c/o SHOWA TITANIUM CO. LITD., 3-1, Nishinomiyamachi, Toyama-shi, Toyama 郵送先: 931-8577, Japan					

第三の発明者名: Kunio Kondo			
Given Name (first and middle [if any]) 名 (名およびミドルネーム[該当する場合]) Kunio	Family Name or Surname 姓 Kondo		
nventor's signature Mani Purk		Date 日付	May 16, 2006
Residence: 注所: Chiba-shi, Chiba, Japan			Citizenship 国籍 Japanese
Mailing Address: c/o Corporate R&D Center, SHOW 郵送先: Chiba—shi, Chiba 267—0056, Jay		-1, Ohnoda	i 1-chome, Midori-ku,
NAME OF FOURTH INVENTOR: 第四の発明者名:			
Given Name (first and middle [if any]) 名 (名およびミドルネーム[該当する場合])	Family Name 姓	or Surname	
Inventor's signature 発明者の署名		Date 日付	·
Residence: धिर्मि:			Citizenship 国籍
Mailing Address: 郵送先:			
NAME OF FIFTH INVENTOR: 第五の発明者名:			
Given Name (first and middle [if any]) Family Name or Surname 化 (名およびミドルネーム[該当する場合]) 姓			
Inventor's signature 並明者の署名	-	Date 日付	
ence:			Citizenship 国籍
Mailing Address: 郵送先:			
NAME OF SIXTH INVENTOR: 第六の発明者名:			
Given Name (first and middle [if any]) 名 (名およびミドルネーム[該当する場合])			
Inventor's signature 発明者の署名	·	Date 日付	
Residence: 住所:	·	<u></u>	Citizenship 国籍
Mailing Address: 郵送先:			
NAME OF SEVENTH INVENTOR: 第七の発明者名:			
Given Name (first and middle [if any]) 名 (名およびミドルネーム[該当する場合])	Family Nam 姓	e or Surname	
Inventor's signature 危明者の署名		Date 日付	•
Residence: 住所:			Citizenship 国籍
Mailing Address: 郵送先:			

Supplemental Priority Data Sheet 優先権に関する追補データシート

Application Number(s) 出顧番号	Country 国名	Filing Date 出顧日		Priority (優先権の Yes 有り	主張? No
2004-342808(Pat. Appln.)	Japan	26/Nover	nber/2004	有記□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□□	
dditional provisional applications: 加的仮出顧: Application Number 出願番号	·(s)		Filing D 出願日		
Additional U.S. or International app 自加的米国または国際出願:	lications:		in the second		
		ng Date M原日	Status: pat (状態:特部	ented, pending, a f成立済、係属中	bandoned 、放棄済

U.S. ASSIGNMENT

IN CONSIDERATION of the sum of One Dollar (\$1.00), and of other good and valuable consideration paid to the undersigned inventor(s) (hereinafter "ASSIGNOR") by

[asert	SHOWA DENKO K.K.	OWA DENKO K.K.				
ASSIGNEE's Name(s) Address(es))	13-9, Shibadaimon 1-cho	ome, Minato-ku, Tokyo	o 105-8518, Japan			
			<u></u>			
	distribution of the second					
	(hereinafter "ASSIGNEE"), the receipt of transfers to ASSIGNEE the entire and ex	which is bereby acknowledged, the unclusive right, title and interest to the	ndersigned ASSIGNOR hereby sells, assigns and invention entitled	1		
(Title of Invention)	METAL OXIDE DISPERSION	, METAL OXIDE ELECTRO	DDE FILM, AND DYE SENSITIZE	D		
	SOLAR CELL					
	relating to International Patent Application of the United States was executed on eve	it outs instantial oil it use as ansain-		3E		
(Insert date	(a) executed on	_: [
of execution of application, if not concurrent)	(b) filed on	data, when known.	by authorized to insert in (b) the specified			
	communications rejecte or remaining	tion application based thereon, for th	on said application and any continuation, divisic e full term or terms for which the said Letters exclusiver, "said application(s) and Letters	Ω,		
	ASSIGNEE, to do all acts which the AS enforcing protection for said invention, said Letters Patent(s), in any interference of proceeding which may arise or be declar including separate assignments and declar producing evidence.	SIGNEE may deem necessary, desiral including in the preparation and prosect, reissue, recramination, or public water in relation to same, such acts to it	without charge to but at the expense of said ble or expedient, for securing, maintaining and ceution of said application(s) and the issuance os proceeding, and in any litigation or other legicude but not be limited to executing all papers viding sworn testimony, and obtaining and affixed his/her/their signature(s).	21		
(Signatures)	n Susumu Kayama	Susumu Kayama	May 18, 2006			
	yanaki Wakizaha	Yasuaki Wakizaka	May 18, 2006 Dune 15 2006			
	(SIGNATURE)	(TYPE NAME)	lda lda a			
	SIGNATURES	Kunio Kondo	May 16. 2006			
	4) (SIGNATURE)	(TYPE NAME)	(DATE)			
.•	5	(TYPE NAME)	(DATE)			
•	(SIGNATURE)	for the president	V			
	6] (SIGNATURE)	(TYPE NAME)	(DATE)			
	η(SIGNATURE)	(TYPE NAME)	(DATE)			
	el(SIGNATURE)	(TYPE NAME)	(DATE)			